

## ABSTRACT

The present invention discloses an optical system for extracting signal light components from a beam including the signal light components and stray light components. The optical system includes a condensing optical element situated on an optical path of the beam for condensing the beam, a polarization changing unit for changing the state of polarization of at least one of the signal light components and the stray light components included in the incident beam transmitted through the condensing optical element, and an extracting element for extracting the signal light components included in the beam transmitted through the polarization changing unit.